IN THE CLAIMS

Please amend the claims as follows:

Claims 1-24 (Canceled).

Claim 25 (Currently Amended): A process for producing a metal nanoparticle-nucleic acid ~~composites~~ composite comprising at least one metal nanoparticle, comprising:

providing a nucleic acid specific metal complex;

reacting said nucleic acid specific metal complex with a nucleic acid to produce a metal complex-nucleic acid conjugate;

removing any non-conjugated metal complexes and/or non-conjugated by-products; and

reacting the metal complex-nucleic acid conjugate with a reducing agent to produce [[a]] the metal nanoparticle-nucleic acid composite,

wherein the metal complex-nucleic acid conjugate is formed by the specific reacting of the nucleic acid specific metal complex with bases of the nucleic acid ~~ough an interactive group~~, ~~and~~

wherein the at least one metal nanoparticle-nucleic acid composite is catalytically active towards electroless metallization, and

wherein the at least one nanoparticle in the metal nanoparticle-nucleic acid composite cannot be visualized by atomic force microscopy.

Claim 26 (Previously Presented): The process according to claim 25, wherein the nucleic acid is reacted while dissolved in solution, immobilized on a substrate or in a semisolid state with said nucleic acid specific complex.

Claim 27 (Currently Amended): The process according to claim 25, wherein the nucleic acid is selected from the group consisting of DNA, RNA, PNA, CNA, oligonucleotides, oligonucleotides of DNA, oligonucleotides of RNA, primers, A-DNA, B-DNA, Z-DNA, polynucleotides of DNA, polynucleotides of RNA, triplexes of nucleic acids ~~and~~ quadruples of nucleic acids [[-]] and combinations thereof.

Claim 28 (Previously Presented): The process according to claim 25, wherein the nucleic acid is double-stranded or single-stranded.

Claim 29 (Previously Presented): The process according to claim 25, wherein the nucleic acid specific metal complex is selected from the group consisting of dichloro (2,2':6',2"-terpyridine)platinum (II) and cis-diaminodichloroplatnium (II).

Claim 30 (Currently Amended): The process according to claim 25, wherein the metal complex-nucleic acid conjugate is ~~separated~~ removed from a non-conjugated metal complex and/or the non-conjugated by-products by chromatography, precipitation or rinsing.

Claim 31 (Currently Amended): The process according to claim 25, wherein the metal complex-nucleic acid conjugate is reacted with at least one reducing agent selected from the group consisting of a boron hydride ~~hydrides~~, a borohydride salt ~~salts~~, a Lewis base: ~~borone complexes~~ borane complex of ~~the general~~ formula $L:BH_3$, wherein L is an amine, an ether, a phosphine, a sulfide, a hydrazine ~~and derivatives~~, a hydroxylamine ~~and derivatives~~, a hypophosphite salt ~~salts~~, formate salt ~~salts~~, a dithionite salt ~~salts~~, [[and]] or H_2.

Claim 32 (Previously Presented): The process according to claim 31, wherein the reducing agent is a gaseous reducing agent.

Claim 33 (Currently Amended): The process according to claim 25, wherein the at least one metal nanoparticle of the composite comprises at least one metal selected from the group consisting of Fe, Co, Ni, Cu, Ru, Rh, Pd, Ag, Os, Ir, Pt, Au and combinations of these metals.

Claim 34 (Currently Amended): The process according to claim 25, wherein the at least one metal nanoparticle in the metal nanoparticle-nucleic acid composite ~~cannot be visualized by atomic force microscopy or wherein the diameter of the metal nanoparticle is~~ has a diameter smaller than 3 nm.

Claim 35 (Currently Amended): The process according to claim 25, further comprising ~~the step of~~ treating the at least one metal ~~nanoparticles~~ nanoparticle within the metal nanoparticle-nucleic acid composite with an elecroless plating solution to enlarge the at least one metal ~~nanoparticles~~ nanoparticle.

Claim 36 (Currently Amended); The process according to claim 35, wherein the at least one metal nanoparticle within the metal complex-nucleic acid conjugate is treated while dissolved in solution, immobilized on a substrate or in a semisolid state with an electroless plating solution.

Claim 37 (Currently Amended): The process according to claim 35, wherein the at least one metal ~~nanoparticles~~ nanoparticle within the metal nanoparticle-nucleic acid composite [[are]] is treated with an electroless plating solution comprising at least one of the metal selected from the group consisting of Fe, Co, Ni, Cu, Ru, Rh, Pd, Os, Ir Ag, Pt, Au and combinations thereof.

Claim 38 (Currently Amended): The process according to claim 35, wherein the at least one metal nanoparticle of the composite [[are]] is treated with an electroless plating solution comprising at least one ~~of the metals~~ material selected from the group consisting of magnetic Fe, Co, Ni, ~~and combinations~~ a combination of these metals, and ~~or combinations~~ a combination of these metals with boron (B) or phosphorus (P).

Claim 39 (Currently Amended): A metal nanoparticle –nucleic acid composite produced by the method of claim 25, wherein the at least one metal ~~nanoparticles have~~ nanoparticle has a diameter of less than 3 nm ~~or cannot be visualized by atomic force microscopy~~.

Claim 40 (Currently Amended): A process for the manufacture of a nanowire, comprising:

providing a metal nanoparticle-nucleic acid composite comprising at least one metal nanoparticle produced by a process comprising reacting a nucleic acid specific metal complex with a nucleic acid to produce a metal complex-nucleic acid conjugate;

removing any non-conjugated metal complexes and/or non-conjugated by-products;

reacting the metal complex-nucleic acid conjugate with a reducing agent to produce a metal nanoparticle-nucleic acid composite; and

growing the metal nanoparticle of the composite by electroless deposition of a metal selected from the group consisting of Fe, Co, Ni, Cu, Ru, Rh, Pd, Os, Ir, Ag, Pt, Au and alloys thereof to produce said nanowire,

wherein the metal complex-nucleic acid conjugate is formed by the specific reacting of the nucleic acid specific metal complex with bases of the nucleic acid ~~or by binding of said nucleic acid specific metal complex to said nucleic acid through an interactive group of said complex binding~~, and

wherein the at least one metal nanoparticle of the metal complex-nucleic acid conjugate is catalytically active towards electroless metallization, and

wherein the at least one metal ~~nanoparticles~~ nanoparticle of the metal complex-nucleic acid conjugate ~~have a diameter of less than 3 nm or~~ cannot be visualized by atomic force microscopy.

Claim 41 (Currently Amended): A nanowire produced by the process of claim 40,

wherein said nanowire comprises more than one metal nanoparticle, and wherein the nanowire comprises insulating spaces between the individual nanoparticles positioned along a nucleic acid strand of said nucleic acid of said metal nanoparticle-nucleic acid composite.

Claim 42 (Previously Presented): A small-scale network of electronic circuit, comprising at least one nanowire according claim 41.

Claim 43 (Currently Amended): The process according to claim 26, wherein the nucleic acid is reacted in a semisolid state, and wherein the semisolid state is a gel.

Claim 44 (Canceled).

Claim 45 (Currently Amended): The process according to claim 30, wherein the metal complex-nucleic acid conjugate is ~~separated~~ removed from [[a]] the non-conjugated metal complex and/or the non-conjugated by-products by gel filtration chromatography, ion exchange chromatography, ethanol precipitation, water rinsing or aqueous salt solution rinsing.

Claim 46 (Canceled).

Claim 47 (Currently Amended): The process according to claim 40, wherein said growing ~~step~~ is a controlled growing ~~step~~.